



ENERGY PRIVATE DEVELOPERS
YOUR PARTNERS FOR ENERGY IN RWANDA

Renewable Energy for

**Renewable Energy for
Sustainable Growth**

Matchmaking, Conference & Exhibition

10 October, 2017

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A POST-CONFERENCE REPORT

Matchmaking Conference & Exhibition

Kigali Conventional Center & Radisson Blu 19-20 October 2017

2017

1st Edition Renewable Energy for Sustainable Growth



EPD Events in 2018

Under Sustainable Energy Week 2018

2nd Edition Renewable Energy for Sustainable Growth

Matchmaking Conference & Exhibition

Kigali Conventional Center & Radisson Blu 5 - 6 Nov. 2018



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INTRODUCTION

Under the patronage of Rwanda Development Board RDB and Ministry of Infrastructure MININFRA, the conference was Organised by Energy Private Developers EPD with supporter and sponsorship of European Renewable Energies Federation EREF, Africa-EU Renewable Energy Cooperation Programme RECP, bfz and Shell Foundation.

At the inaugural of annual “Renewable Energy Conference For Sustainable Growth”, ventured into the Rwandan renewable energy market and provided a platform to international business and partnerships by highlighting attractive investment opportunities in Rwanda’s renewable energy sector by engaging both private and public sectors players in a networking, dialogue, technological innovation and knowledge exchange that will scaled-up the use of renewable energy for sustainable growth in Rwanda.



“I think the Cost of Energy will come down when we make this transition to renewable energy”

Al Gore



1st Edition Renewable Energy for Sustainable Growth

A POST CONFERENCE REPORT

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Dr. Ivan Twagirashema.
Chairman of Energy Private Developers

EPD has a vision to facilitate access to modern energy by all homes in Rwanda

It's my big pleasure to welcome all of you in this important event prepared by EPD, for its first time. EPD is a professional association, under Private Sector Federation in the chamber of Industry, created in 2013 and got its official accreditation in October 2014 with 25 company members which the number increased to about 100 companies operating in the energy sector in Rwanda.

EPD has a vision to facilitate access to modern energy by all homes in Rwanda, we collaborate with government in formulation of policy and practices that achieve universal energy access in the most economical way, advocacy for help and build a positive working environment for the private sector and forge strong partnerships between the private sector and the public sector.

Dr. Twagirashema pointed out that EPD is significantly contributing to the national sustainable growth by providing reliable and environmental friendly renewable energy technologies in Rwanda. We are highly concerned by the 7-year government programs and Targets where electricity should reach 100% of the total population of Rwanda, and reducing dependence to biomass, recognizing the important role, as private sector, in the development of the country and Identifying the role of renewable energy technologies in boosting green and sustainable economy of the country; This matchmaking conference and exhibition aims at promoting renewable energy investment, raising awareness for the use of renewable energies in different sectors of economic growth, accelerating rural electrification in Rwanda and exploring more opportunities of renewable energy for sustainable agriculture in its entire value chain, and exploring available financing for renewable energies.

From this conference, we are expecting more investments in the renewable energy sector; more business cases and joint-venture partnerships. I cannot end my remarks without thanking the Government of Rwanda for the effort to enabling a conducive business environment private sector.

Our gratitude goes to the association parental mother, PSF, for its special daily advice and advocacy for our businesses, you have really made us a well-organized and growing organization in energy sector here in Rwanda

We thank our supporters and co-organizing partners, European Renewable Energy Federation (EREF) , Africa-Europe Renewable Energy Cooperation Program (RECP), bfz and Shell Foundation for their support to the daily activities and particular financial support to this event.

Finally, we thank you all our speakers and delegates from abroad, your commitment to come here in Rwanda gives us a hope to achieve our targets. It is really a big contribution to the economic growth to our country.



Hon. James Musoni
Minister of Infrastructure

"It is a mandate of the Government of Rwanda makes sure that energy is granted for all".

In his opening remarks, the Minister of Infrastructure, Hon. James Musoni noted that renewable energy sources such as solar, wind, biomass, geothermal, as well as hydropower, present a huge potential to provide energy to the world adding that "these sources, if well exploited, are sufficient to meet the current energy demand in the world.

The Government is committed to working closely with the private sector in increasing off grid connectivity in remote areas of the country and scale up the current demand.

It is a mandate of the Government of Rwanda to make sure that energy is granted for all. We are currently focused on promoting off-grid power connections in the country for the simple reason that it is more affordable and sustainable, this is why we also encourage more innovative ways to generate power beyond hydro-electric means if the targets are to be achieved.

Hon. Musoni said increasing power generation is imperative as there is growing demand for energy in the country to match industrialization and economic growth.

Government of Rwanda envisions reaching universal energy access (52% on-grid connection and 48% off-grid) by 2024, with the current rate being at 40.7% (29.5% on the grid and 11.2% off-grid).

Basing on the EICV4, says, that there are around 1.5 million households yet to be connected, of which 720,000 households are to be connected using off-grid to reach universal access. As the country aims at connecting at least around 120,000 households per year, as opposed to the current 84,000 households connected each year through off-grid methods, Hon. James Musoni noted that the country needs an even stronger and more vibrant private sector.

So far RDB has signed 40 Public Private Agreements within the energy sector



Clare Akamanzi
Chief Executive Officer
Rwanda Development Board RDB

This forum is crucial in attracting more investments in order to increase accessibility, affordability and availability of electricity in Rwanda as per our Government's seven-year program. So far RDB has signed 40 Public Private Agreements within the energy sector, proving our country's business-friendly environment in providing affordable frameworks for investors.

The government's plan aims at connecting all the households in next seven years, by 2024, connecting all the productive users by 2022, and ensuring that the entire capital is connected in the next two years by 2019. The Government's strategy of electrifying the entire country by 2024 shows the scale of opportunity for investments.

The Provision of investment certificate is one of the investor' special treatment with a variety of non-fiscal and fiscal incentives (tax exemption including VAT on importation of equipment, investment allowance up to 50%, free repatriation of profits, 100% written-off development and research costs, preferential corporate income tax of 15%) being provided.

There are opportunities for Rwanda to invest in the abundance of the renewable energy

Advancing renewable energy for sustainable energy and green economy is one of the ways that can boost energy investment internationally. European Union View obliges African Investment for some countries binding national renewable energy investment to reduce CO2 emissions, market openings and regulation of infrastructure services, less administrative burdens including easier, faster and transparent access to permits which Rwanda Toped 3rd in Ranking according to Climate scope 2016 followed by Kenya and Cameroon.

Rwandan firms to access finance requires same flexibility approach under clear system rules of international standard. However, that access to funding for small sums in international donor terms must come through partner banks to the donors on a regional and local level and bank clerks must be trained on how to finance small or medium investments with upfront financing in the long-term targets.

There are opportunities for Rwanda to invest in the abundance of the renewable energy sources with hydropower front-runner, wind energy which still less developed, solar power-average solar radiation of 4-6kWh per square meter/day and others like biomass and peat.



Dr. Dörte Fouquet
Director
European Renewable Energy Federation (EREF)



Mr. Stephen Ruzibiza.
Chief Executive Officer of Private Sector Federation PSF

Rwanda desire to take the climate resilient, low-carbon development path towards achieving poverty reduction.

There is abundant labour in Rwanda with favourable environment of investing in energy like sunshine and waste products which are vital ingredients of the renewable energy which should be taped fully. This conference is an essential milestone in achieving two critical strategic themes; mainly promoting inward investment into the renewable energy sector in Rwanda and identifying challenges and agreeing on a roadmap for addressing them.

These two issues are closely intertwined, and both are critical for achieving growth in the renewable energy sector in Rwanda and that they need to happen in tandem and to the satisfaction of a diverse group of stakeholders including the public sector, i.e. regulators, the private sector both domestic and foreign and the citizens who are the final consumers of energy. On this keynote address, therefore, I chose to welcome those who want to invest in the sector.

The electricity in all EAC partner states still accounts for between 15 to 18% of total production costs with the lowest price of hydroelectricity standing at US\$ cents 5 to 6 per kWh in Tanzania. Virtually, all the partner states are working towards lowering the cost to about US\$ cents 5 per kWh to make electricity more affordable for the consumer. Most of them still subsidise the cost, especially for industrial consumers.

If renewable energy can breach the benchmark price of US\$ cents 5 per kWh in the EAC, then can we safely say we are getting there. But the questions lie on how can we achieve this? A smart mix of cost reduction strategies, price support mechanisms and promotion will help accomplish this, based on growing relationships I mentioned previously. Current scarce investment financing in Africa still chases unsustainable generation business models, at the expense of sustainable ones. Cost of equity always exceeds that of debt which contrasts the other parts of the world where there are massive amounts of financing flowing into the renewable energy space.

Citing the International Forum on Energy Transitions says China's renewable energy investment constitutes one-third of the world's investment in the area. In 2015, China's total investment in renewable energy stood at US\$ 102.9 billion in which the infrastructure cost of PV has gone down 70% since 2005. "This cost is projected to go further down by 59% by 2025," he added.

The efforts to drive capital towards renewables in the EAC in general and Rwanda in particular, through innovative financing models must be the primary focus contemporarily. Rwanda desire to take the climate resilient, low-carbon development path towards achieving poverty reduction.

The Tested programs like the Global Energy Transfer Feed-in tariffs (GET Fit) which have supported the establishment of a utility-scale PV plant in Tororo, which Uganda is yet to roll out to other EAC partner states fully. However, that the mutual agreement on the needs to fast-track the move is very necessary for the implementation of the project. These kind of programs can help offset the impact of high capital exposure in the nascent stages after which, a few years there could an attraction to more private capital into the renewables space.

We expect to network more amongst ourselves to help bridge the gap between ourselves as stakeholders, to align our interests together and to advance the sector forward.

To our foreign dignitaries, delegates and other participants from abroad, Welcome to Rwanda. I wish to thank the Energy Private Developers (EPD) together with the European Renewable Energy Federation (EREF) who have taken this significant milestone to promote renewable energy investments in Rwanda. Special thanks to towards the Rwanda Development Board (RDB) for their efforts to organise this important conference.

PANEL DISCUSSION HIGHLIGHTS: DOING BUSINESS IN RWANDA; *Investment promotion , incentives and procedures off-grid and mini-grids.*



Private utilities like solar mini-grid can boost affordable technology by initiating more drivers like Solar pay Go system that could empower communities at the bottom of the pyramid in remote villages.

It is estimated that solar pay Go system can cover over 90% of all market sales. However, being highly capital intensive, the risk of saturating the readily accessible market at the expense of not serving the bottom-of-the-pyramid and the more complex market is looming. Such drives necessitate access to cheap capital and a consumer financing solutions.



EVARY MURASA NDABARINZI,
Managing Director, SOLAR KIOSK, RWANDA.

Buying a high-value solar product at high-interest rates vested with local banks limit borrowing by end-users is the main challenge. However, investors should insist on empowering people and their homes or small businesses using a small renewable energy system that is not connected to the electricity grid called a stand-alone system can make economic sense and appeals to their environmental values.



WINIFRED K NGANGURE,
HEAD OF INVESTMENT PROMOTION DEPARTMENT
AT RWANDA DEVELOPMENT BOARD.

Rwanda is open in terms of doing Business and as a result, there are fiscal incentives that have been put in place include accelerated depreciation of 50% for key priority sectors, including energy, exemption of capital gains tax, seven-year corporate income tax holiday for large projects in strategic sectors, including energy, exports, tourism, health, manufacturing and ICT.

Among other factors which are non-fiscal like Quick online registration for company incorporation and investment certificate, assistance with tax-related services and exemptions, Assistance with obtaining visas and work permits at the One-stop center and Provision of Aftercare services to facilitate project implementation all facilitate the investors who want invest in energy in either off-grid or mini-grid energy.



ERICA MBANDA,
The Director Of Operations
Centennial Generating Company.

An energy firm that facilitates growth for businesses in Sub-Saharan Africa through offering solar and battery storage energy pinned that Renewable energy opportunities should go beyond households as the market opportunities and solutions for energy consumers are being sought.

PANEL DISCUSSIONS: Innovative Sustainable Energy Systems Beyond The Grid Where There Is Stand Alone And The Mini Grid Where There Is Sector Heading In The Region?



In order to empower communities at the bottom of the pyramid-like small hydropower projects that can utilize the existing financing platforms, technology innovations and strategic partnerships for solar lighting and solar mini-grids would be an alternative to companies mitigating end user risks, based on their sales on mini-grid installations.

Off-grid market opportunities in Rwanda and EAC energy sectors that Specialize in the solar grid-connected systems, needs a backup system that innovates either off-grid and grid systems with new technologies like solar roofing for sustainable growth of the energy to be achieved in the region.



VICTOR HAKUZWUMUREMYI,
Programme Technical Manager, Energy4impact.

There is a mismatch between demand and supply combined with high costs of distribution grids which typically range from the 20-45% of total projects costs which is a stumbling block. However, that the Government can support the small projects with the focus on subsidizing assets for productive use and income generation in order to identify sites for mini-grids centred on an anchor load with predictable electricity load profile to reduce distribution costs and ensure economic viability.

In the past decade the level of the skills and competence in the sector has improved significantly. However, project financing is still lacking thereby imposing pressure on the sector to demonstrate a stronger track record, benchmarks and predictability as well looking other solutions to sustainability.



CLAIRE NELSON,
Power Africa, Coordinator, For Rwanda.

Commercial and industrial applications to provide affordable solutions for industrial and commercial customers in the solar as service companies need to provide electricity at no upfront cost to the users between 50Kw-2MW and bridge the financing gap existing between local finance usually less than (50,000 pounds) and international development finance usually over (2.5Million pounds). Innovative capital raising crowdfunding has managed to secure 260,000 in 3 weeks for a Kenyan flower farm. However, that time is the biggest enemy for renewable energy projects to materialize. Projects currently take between 1-7 years to develop depending on the country, business model and entrepreneur.



RASMUS HANSEN,
The Managing Director, Ecoligo Energy Company

Time range of the project development stages should be shortened to allow viable projects to materialize and non -viable ones to terminate quickly. A successful renewable energy project usually combines a tailor-made product with innovative financing and a strategic partnership to deliver the service product.

It is an ecosystem off conditions that enables some business models to be successful and the sectors who are starting to notice the trends leading to success. It was debated that access to funding to some extent is not the main challenge but rather lack of the viable deals combined with the ease and speed of access to funders.



PATRICK MUGABO,
HEAD OF OPERATIONS, MOBISOL
RWANDA LTD.

Some of the challenges like high import taxes on solar power materials, which is currently at 25 percent, sudden cancellation of Power Purchase Agreement (PPA) signed between REG and investors, bureaucratic PPA the registration process, among others, are the challenges affecting the energy sector in Rwanda.

OPPORTUNITIES FOR NATIONAL AND INTERNATIONAL PROJECT FINANCING FOR SMALL HYDROPOWER PROJECTS.



An organization that advocates for sustainable development in Europe for him to improve livelihoods and protect the environments on which these livelihoods are built the Technological related challenges threatening the progress of the renewable energy in Africa which be mitigated. I would like to advise local companies to always be selective on the experts and designers they use for them to be able to have a strong company that would last longer.



EUGENE OBIERO,
Senior Manager, AFRICA PROJECT CAMCO

A Clean Energy, company that deals in renewable Fund Manager based in the United Kingdom, with subsidiaries in Kenya, say, policy implementation is a serious issue as regards to the energy sector sustainability in the region and on the continent.

Some clauses in policies are not clear where you find that there are grey areas like acquiring the license to the private companies, power purchase agreement and untimely changes of the laws and policies regulating private energy sector is a constraint and a challenge that delays projects' he says. He also pointed out that the financing and grants from the donor countries are still a challenge since most of the companies have low financial capabilities.



DIRK HENDRICKS,
The Senior Policy Advisor,
Ref Renewable Energy Federation Ref.

There are opportunities for national and international project financing for small hydropower projects, however, they need to build valuable project ideas they need develop concrete investment opportunities that would attract bankability.

The problem is not a lack of funding as might be expected instead it's the lack of packaged bankable projects which points to a need for more project preparation. Government should have enforceable regulation and tariffs which are trending with time rather being absent and untimely. Mobilizing private sector investment in renewable energy in Sub Saharan Africa needs addressing early stage barriers to renewable energy project development, technical assistance and financial advisory.

By implementing renewable energy projects helping initiative through collaboration like donation and the technical capacity building would solve the problems of lack of funding that entangles the small projects who do not meet the sizing the requirement, funding and local capacity, legal and policy frameworks that are nascent and untested in many countries accompanied with fear of losing since it requires expensive expenditure at first onslaught

The commercial grants that support the most sustainable market-based business models to grow are challenged with the investors who always target the returns whenever the need to fund third countries arise instead of looking other ways of getting sources like homegrown funding.

Renewable energy performance platform (REPP) to focus on the small to medium-sized renewable energy projects (1-25 MW) from feasibility to financial close. REPP provides technical assistance, access to risk mitigation instruments and finance and result based finance. Finance catalyst Provides technical assistance for small and medium scale 0.5-50 renewable energy projects in sub-Saharan. Africa to reach bankability and links them to finance opportunities.

Renewable Energy Promotion, indicated that the main challenges affecting the Umbrella of the private Energy developers are the financial capacity which too big enough to be financed by the local banks and too small for the international funders.

Local firms in energy sector can't manage to access funding from the international corporates which have their high standards and requirements they follow. For instance, international corporates give out a funding for the firm's design which complies with international standards. The local firm must submit an Engineering construction project proposal designed by an international expert as a qualification which is very expensive especially those from third world countries like Rwanda making developing costs.

International engineer to design a proposal for Hydropower plant a firm must pay out 4 Million Eurodollars' worth 3.5 Billion Rwandan Francs which is not affordable to big numbers of energy firms in African countries.

QUESTIONS AND ANSWERS



1. HOW CAN SMALL AND MEDIUM ENERGY PROJECTS FROM AFRICA GET FUNDING FROM ABROAD?

The only way to solve technological issues where engineers have low skills when it comes to draft energy project proposal says that engineers need more experience and training that would help them much especially those coming developing countries who are still developing.

Business to business meeting made me gain experience regarding on how to develop hydropower projects development sustainably. "This inspired me on how to make the better implementation of the pipeline projects of my company which have the target of providing 800 kW hydropower plant

Households and businesses to gain access to off-grid electricity services without waiting to donations they seek local micro-lending facilities like SACCO's and banks (Commercial and Micro-finance) that are equipped with knowledge and experience in lending the sector. RECP has contributed a lot to African countries include Rwanda on the policy advisory, private sector co-operation, access to finance, innovation and skills development.

HOW CAN THE TECHNOLOGICAL CHALLENGES IN THE SECTOR BE SOLVED? •GREGORY TAYI, EXECUTIVE DIRECTOR REPRO ENERGY RWANDA.

ENERGY PRIVATE DEVELOPERS SIGNING MOU'S



The Energy Private Developers EPD and Rwanda Energy Group REG signed a Memorandum of understanding on the second day of the event to facilitate the Energy Private Developers to achieve its missions and activities on advocating for its members, encouraging good collaboration and partnership among members and attracting foreign companies and investors to work with local companies.



Energy Private Developers EPD also signed an MOU with the China-Africa Renewable Energy Co-operation and Innovation Alliance to promote renewable energy investment in Rwanda.

Through the annual summits interaction on the regular basis would lay a platform that brings people together especially in the energy field to discuss the most pressing issues affecting the electrification targets.

This week's event has made me signing partnership deals and joint ventures between our company and Hobuka Ltd Rwanda to develop mini-grids in Rwanda over the coming years which is beneficial in terms boosting our company performance. So the event was really timely.

BUSINESS TO BUSINESS MATCHMAKING TESTIMONIALS

Attending the EDP/EREF conference in Kigali has been a great opportunity to get an update on the energy sector in Rwanda and the world and meeting with the local and international stakeholder's active in the market a matchmaking activity.

The good side of attending of these meetings is that you end up knowing nice and interesting people who will become part of your business network as from now. I would like to thank all the organizers of this event for the tireless effort and professionalism.

SABINE CHRISTIANSEN ANDORRA, CEO OF VERDQ.I.

We are grateful for the opportunity to be on the panel to present our solutions to address the financing barriers of commercial and industrial solar energy projects in sub-Saharan Africa and our advice hopeful will be useful in laying strategic plans for concerned projects.

HANSEN SALES MANAGER, ECOLIGO.



LESSONS LEARNED AND COMMENTS FROM PARTICIPANTS

a) Benoit Karekezi: Managing Director, Innotech Limited learnt that the Government have the primary responsibility to make sure that every citizen should have electricity, however, that this mission would hard when the private sector does not involve in the campaign. The government has to contribute to 78% meanwhile for us we have to provide 22% by 2024 so that no citizens are left behind.

b) Celine Umurenzi: CEO, Munyax, says that the power purchase in the villages are on the low rates and the private sector should look ways to sort the issue as a result. We provide solar water heaters, PV panels and photovoltage kilowatts, and the exhibition has made our products Known-Thanks The energy private developers to organize the event.

c) Eng. Clementine Niyonkuru: Director of Quality Assurance and Monitoring & Evaluation, Ngali energy, learnt that organizing exhibition and through technology showcasing can play role reaching renewable energy for sustainable growth.

d) Monica Keza Katumwine: Managing Director, BBOX, learnt that financial incapability is the major challenges affecting the sector.

CONCLUSIONS

The two-day conference & exhibition was organized to venture into the Rwandan renewable energy market and provide an international business and partnership platform for both public and private sector players.

The government of Rwanda recognizes and appreciates the effort of the private sector in Rwanda and creates a conducive business environment for investors to achieve sustainable growth of the country, and recommends such initiative for EPD to be a continuous platform to address challenges in energy sector.

The conference was an opportunity for participants from 21 countries across the world to network, dialogue, exchange knowledge and explore advanced renewable technologies to accelerate rural electrification and power agriculture. The conference discussed also financing opportunities for renewable energy projects, mainly hydro-power projects.

Among the challenges, access to finance for renewable energy projects remains a critical for many countries, particularly in developing world. To attract more investments in renewable energy sector, public-private partnership was highly recommended.



THANK YOU PATERNERS AND SUPPORTERS



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